

THE AMERICAN PSYCHOLOGIST

THE AMERICAN PSYCHOLOGICAL ASSOCIATION, INC.

7 HIS is the first issue of THE AMERICAN PSYCHOLOGIST, the professional journal of the American Psychological Association. It will contain articles on the training of psychologists, their duties, opportunities, employment, and other professional matters. In it will appear APA programs, proceedings, and presidential addresses. Sometimes it will contain similar material from the APA divisions or from regional psychological societies. It will continue the functions of the "Psychology and the War" section of the *Psychological Bulletin*, and will publish the remaining articles in series which started in the *Bulletin*. Special sections of notes and news, obituaries, a calendar of coming meetings, and reports from the APA office will be regular features.

THE AMERICAN PSYCHOLOGIST is intended to serve the professional interests of American psychologists. Articles which have that purpose are invited.

THE AMERICAN PSYCHOLOGIST

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THE REORGANIZED AMERICAN PSYCHOLOGICAL ASSOCIATION

DAEL WOLFLE

Office of the American Psychological Association

THE American Psychological Association has reorganized its governing structure, broadened its classes of membership, and embarked on a new program of professional as well as scientific endeavor. These changes are embodied in the new constitution and the by-laws which the members adopted in 1944 and which went into effect in 1945. Since these changes outline the future of the association, the APA's new journal, *THE AMERICAN PSYCHOLOGIST*, starts its first issue with a description of the "new" APA.

The series of events which culminated in the new constitution started in 1942 in the deliberations of the Subcommittee on Survey and Planning for Psychology of the National Research Council's Emergency Committee in Psychology. The Emergency Committee met with the Council of Directors of the APA and the Board of Governors of the AAAP in September 1942 to discuss possible changes. Plans were initiated then for an intersociety constitution convention. This convention met on May 29-31, 1943, with representatives of all national psychological organizations present. Discussion was held on kinds of reorganization which might best serve the professional needs of psychology. The work of the convention was carried on by a continuation committee, which was succeeded in September 1943 by a joint APA-AAAP constitution committee.

Members of the associations were kept informed of the plans and discussions through a series of articles, most of which appeared in the *Psychological Bulletin*. At several stages, mail ballots were conducted to determine the attitudes of psychologists toward important questions, such as what divisions should be established, and whether the reorganization should be made during the war years or postponed until later.

At the Cleveland meetings in 1944 definite action was taken. The APA voted to adopt the new constitution. The AAAP voted to go out of existence as a separate body and to become part of the APA. Both of these votes were supported by mail ballots

which showed the actions taken to be the will of a substantial majority of both associations.

The Psychometric Society and the Society for the Psychological Study of Social Issues were then invited to become divisions of the APA. SPSSI accepted. The Psychometric Society has not yet done so.

Although many people helped plan the APA reorganization, and many did the work necessary to make the plans effective, one name stands out as the person who started the movement and who gave wise counsel in the months when the new constitution was taking shape. That is Robert M. Yerkes. The new constitution reflects the will of the membership; otherwise it would not now be in effect. But the membership has Professor Yerkes, more than any other one person, to thank for its new constitution.

PURPOSE

The purpose of the reorganization was two-fold. One reason for the change was to give greater recognition to the individual interests, both scientific and professional, of specialized subgroups within the total membership. Several years ago a feeling that the APA did not give adequate attention to divergent interests led to the formation of the American Association for Applied Psychology and the Society for the Psychological Study of Social Issues. The broadened objectives of the APA and a structure which encourages special interests have brought both of these organizations into the APA.

The second reason for reorganization was a widespread belief that the association should pay greater attention to the professional problems of its members. The constitution formerly stated that the object of the APA was the advancement of psychology as a science. The corresponding statement in the new constitution reads: "The object of the American Psychological Association shall be to advance psychology as a science, as a profession, and as a means of promoting human welfare." This change is not an idle rewording of the preamble to the con-

stitution; it reflects a real change in the purposes of the association. The establishment of *THE AMERICAN PSYCHOLOGIST* is one example. Its pages will contain much about the training of psychologists, their positions, job opportunities, organizations, etc. but not much about their research findings.

MEMBERSHIP

The new constitution provides for some changes and some additions to the classes of membership. Psychologists who used to be Full Members of the APA or Fellows of the AAAP are now Fellows of the APA. Associates of both organizations retain that title under the new setup. The Life Membership class of the old APA is retained in the new organization. These three groups, Fellows, Associates, and Life Members, make up the members of the new APA.

Requirements for these three classes of membership have not been changed in any major way by the new constitution. Fellows must still hold the Ph.D. in psychology or a closely related field and must have either acceptable published research or professional experience beyond that degree. Associates must have a minimum of two years of graduate work or one year of graduate work and one of professional experience. The divisions, however, have the right to set additional requirements and to establish additional classes of membership *within the division*. Thus one might qualify as a Fellow on APA requirements, but not qualify as a Fellow in a particular division. The opposite situation is not permitted; one cannot be a Fellow of a division unless he qualifies as a Fellow of the APA.

The rights of Associates are greater than they were under the old constitution. Besides being able to vote in all elections, Associates may now become members of the Council of Representatives and the Board of Directors, and they may serve on committees. The four principal officers of the association, however, must be Fellows.

In addition to the members, there are two groups of *affiliates*. The first group is made up of graduate and undergraduate students who wish to become affiliated with the APA, but who are not yet qualified as Associates. Persons in this group are called Student Affiliates. The second group, called Division Affiliates, consists of persons who are members of a division but not of the APA. Neither Student

Affiliates nor Division Affiliates are considered members of the APA. Neither may hold office or serve on committees of the APA. Both, however, may attend meetings, and both will receive the official journal and yearbook of the association.

These changes make a more complicated set of membership and non-membership classes, but they give the franchise to all members, and they provide for affiliation with the APA by students and others who are not members but who have an interest in psychology or in some particular division.

ORGANIZATION

The structure of the reorganized APA is in some respects a radical break with the old pattern. Instead of having one undifferentiated whole, interest differences have been recognized by the creation of eighteen APA divisions. Some divisions represent differences in subject matter interest, such as the Division on Evaluation and Measurement and the Division on Esthetics. Others represent strictly professional differences, such as the Division of School Psychologists and the Division of Military Psychology.

Several kinds of changes in divisional structure may occur. As one possibility, two or more divisions might unite. Several pairs of divisions showed a large overlap in prospective membership when the members of the APA and AAAP were asked in 1944 to indicate the divisions to which they would like to belong. If this overlap remains when actual divisional membership lists are drawn up in 1946, some divisions may decide to combine. It is possible also that some divisions may die for lack of support. A minimum membership of fifty is required. If the number of APA members in a division falls below this figure, the Council of Representatives may dissolve it. There is also the possibility that new divisions may be created. Whenever fifty or more members of the APA feel that an emerging new psychological interest justifies a new division, they may petition the Council of Representatives to create one.

The present list of eighteen divisions is a trial. Strong divisions will remain. Weak ones and those which overlap with another division too much may go out of existence. If an important and distinctive group is not now represented, it may petition for the formation of a new division. The divisional

structure is sensitive to interest differences and can keep step with changing needs.

RELATION OF THE APA TO ITS DIVISIONS

The relations between the APA and its divisions are something like those between the United States and its states. Each division has a good deal of autonomy over its own internal affairs, just as do the states. A division, like a state, however, is limited in its powers. It cannot do anything to interfere with the welfare of another division, and on matters which affect psychology as a whole the APA retains power. The parallel with our state and federal governments breaks down somewhat in elections. The officers of each division and its representatives to the Council are elected by members of the division, but the APA officers are elected either by popular vote of all members or by the Council directly.

GOVERNMENT

The Council of Representatives is the chief governing body of the APA. The primary change in government is the fact that the Council of Representatives has replaced the Full Members of the APA as the body having legislative power over most business of the association. The election of some officers and votes on amendments to the constitution are handled by direct vote of all members.

The Council of Representatives contains two types of representatives. Most numerous are the representatives of the divisions. The number of representatives which each division has in the Council depends upon the number of APA members who belong to that division. The formula for determining the number of representatives is a compromise between equal representation for all divisions and representation in proportion to total membership in a division. No division can have fewer than two or more than six representatives in the Council.

The Council of Representatives also includes nine regional representatives elected by popular vote of the APA members residing in each of nine geographic areas. One matter on which there is still some discussion is the belief held by some members that regional representatives should be replaced or supplemented by more direct representatives of the regional or state psychological associations. It is possible that some change in the constitution of the

Council of Representatives may be made to provide these local groups with more direct representation. Even if this is done, the Council will consist chiefly of representatives of the several divisions.

The Council will normally meet once a year, at the time of the annual meeting of the association. Special meetings may be held at other times if necessary.

The Board of Directors is the administrative agent of the Council and exercises general supervision over the affairs of the association. It serves essentially the same functions as did the Board of Governors of the AAAP or the Council of Directors of the pre-1945 APA. The Board of Directors will give preliminary consideration to problems and report its recommendations to the Council. Vote of Council then will be decisive. In the intervals between meetings of the Council the Board has authority, and in emergency situations Council may delegate power to the Board, as it did in September 1945 when a full meeting of the Council could not be held.

The Board of Directors consists of the four officers of the association and six members of the Council of Representatives elected by the Council. These six Directors serve three-year terms with two new ones being elected each year. The Board will normally meet twice a year.

The APA has four officers. The President and the President-elect are chosen by preferential vote of the entire membership. The President-elect serves as vice-president for one year and then automatically becomes President for one year. The other two officers are elected by the Council of Representatives, the Recording Secretary for a three-year term and the Treasurer for a five-year term.

In addition to its regular officers, the APA has an Executive Secretary who is elected by the Council of Representatives to serve as a full-time employee of the association. The Executive Secretary is responsible for the administrative detail of the association, for managing its publications, for maintaining a placement service, for editing this JOURNAL, for such other special duties as may be assigned by the Board of Directors and Council of Representatives, for the general development of the psychological profession, and for its relations with other scientific and professional groups and with the public.

Preliminary plans for the office of the Executive Secretary call for a staff of about six assistants.

This staff will handle the business of the association, business which formerly was divided between the APA Secretary's office, the AAAP Secretary's office, the office of the APA Treasurer and Business Manager of Publications, the AAAP Treasurer's office, the office of the AAAP Business and Circulation Manager, and the Office of Psychological Personnel of the National Research Council.

Many of the affairs of the reorganized APA will be handled by committees, just as were the APA and AAAP affairs before the reorganization. The new constitution permits the appointment of such special committees as may from time to time be necessary, and requires the appointment of eight standing committees and one board. The Policy and Planning Board is a new feature in APA organization. Its nine members are chosen, so far as possible, to represent all active interests within the organization. The Board's function is to consider both current and long-range association policy. It may at any time recommend such changes in the policies, and such extensions or restrictions of the functions of the association or its divisions as seem wise and in keeping with the purposes of the association. Every five years the Policy and Planning Board is to review the structure and function of the association as a whole and to recommend such changes as seem wise.

COST

What the new association will cost is a question of interest to every member. It will cost more money, because the association has decided to do more things. The increased funds will come partly from an increase in membership and partly from larger dues. For some years the dues of a Full Member of the APA have been ten dollars a year. For the last few years each Member has paid an additional assessment of two dollars a year to support the work of the Office of Psychological Personnel. Instead of this total of twelve dollars a year, each Fellow will now pay dues of fifteen dollars. Former Fellows in the AAAP, who have been paying seven dollars a year plus a two dollar assessment to help support the Office of Psychological Personnel if they were not members of the APA, will find that their dues have gone up to fifteen dollars.

Each Associate of the APA has been paying six dollars annual dues and two dollars to support the Office of Psychological Personnel. An Associate of the AAAP has been paying seven dollars a year plus the two dollar assessment for the Office of Psychological Personnel if he was not a member of APA. Now Associates will find that their dues have been increased to ten dollars.

Those psychologists who have been members of both organizations will experience a considerable saving under the new organization since one annual dues check will replace the two checks they have been accustomed to writing. All members will receive *THE AMERICAN PSYCHOLOGIST*, the *Yearbook*, the *Psychological Bulletin*, and the *Psychological Abstracts*.

Some members will belong to more than one division. Those who do will be charged one dollar a year for each division, in addition to the first one, in which they hold membership. This dollar goes to the division to cover its expenses.

Student Affiliates will be charged five dollars a year. They will receive *THE AMERICAN PSYCHOLOGIST*, the *Psychological Abstracts*, and the *Yearbook*.

Division Affiliates will pay two dollars a year. They will receive *THE AMERICAN PSYCHOLOGIST* and the *Yearbook*.

CONCLUSION

Outlined above are the principal features of the APA's new organization—its objectives, membership classes, divisions, and government. The most important change is the change in the association's objectives. We have all recognized the obligation to advance psychology as a science; interest in the unsolved problems of human nature was the attraction that made us psychologists in the first place. But we are not only a group of inquiring psychologists; we are a professional group living in a complex society. We have now agreed that the APA's professional obligations to its members and the psychologist's obligations to society are inescapable. We have reorganized so that we may better meet those obligations.

PSYCHOLOGICAL RESEARCH ON PILOT TRAINING IN THE AAF

STAFF, PSYCHOLOGICAL RESEARCH PROJECT (PILOT)¹

Randolph Field, Texas

THIS is the tenth of a series of articles (1, 2, 3, 4, 5, 6, 7, 8, and 9) dealing with the Aviation Psychology Program under the direction of the Office of the Air Surgeon, Headquarters Army Air Forces.

FUNCTIONS, HISTORY, AND PERSONNEL

The function of the Psychological Research Project (Pilot), Randolph Field, Texas is to conduct research leading to improvement of pilot selection and training. Most of its research has been concentrated in two main areas: objective measures of flying skill, and instructor selection. Other research includes a job analysis of the pilot's task, the development of printed tests of flying information, studies in fixed gunnery, and training experiments.

The research of the Project has been conducted in schools throughout the AAF Training Command. In the fiscal year ending 1 July 1945 Project personnel spent a total of 1,381 man-days on field trips to pilot training schools. The Project has been kept abreast of pilot training problems in other countries by visits of 20 research officers representing the air forces of our allies.

The Project dates from the assignment of Major Neal E. Miller as Director and Captain Richard P. Youtz as Assistant Director on 1 February 1944. Later, Captain Stanford C. Ericksen and 1st Lt. William E. Galt completed the original roster of officer personnel. As of 1 September 1945 its strength was 8 officers, 14 psychologically trained enlisted men and 17 on-the-line trainees. Four of the officers have Ph.D.'s in psychology; the others are rated army pilots with training beyond the bachelor's degree in education or psychology. All the 14 enlisted men directly assigned to this Project have Bachelor's degrees or the equivalent, 5 have Master's degrees, and 2 have Ph.D.'s.

The research of this Project represents the co-operative, creative work of all its personnel, and in many instances the professionally trained enlisted men have been given responsibilities and turned out work of officer caliber. A roster of the names of the officers and enlisted men on duty at the Psychological Research Project (Pilot) prior to 1 September 1945 follows:

Officer Personnel Assigned to Psychological Research Project (Pilot)

Ericksen, Stanford C.	Latham, Albert J.
Galt, William E.	Miller, Neal E.
Hagin, William V.	Showalter, Ralph E.
Hagy, Harold H.	Youtz, Richard P.

Enlisted Personnel Assigned to Psychological Research Project (Pilot)

Ahner, Charles W.	Helmer, Leo A.
Blake, Robert R.	Hemphill, John K.
Bowles, J. W., Jr.	Ismael, Walter W.
Cobb, Bart B., Jr.	Johnston, Roland E., Jr.
Connery, Maurice F.	Kamman, James F.
Delman, Louis	Krasnow, Robert H.
Derthick, Charles	Levine, Robert
Dixon, Robert E.	Matheny, William G.
Ewing, Thomas N.	Nygard, John W.
Freedman, Morris	Robbins, Irving
French, Benjamin I., Jr.	Rohrs, John R.
Friedman, Sidney	Rust, Ralph M.
Gershenson, Charles P.	Spivak, Daniel C.
Glaser, Ezra	Spro, Allen J.
Gleason, John G.	Stratton, James W.
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RESEARCH

Job Analysis of Pilot's Task

A thorough understanding of the pilot's task has been a necessary foundation for developing objective measures of flying skill and printed tests of flying information as well as for suggesting areas which should be emphasized in construction of classification tests. One of the main ways of acquiring this understanding has been through actual flying experience. In addition to thorough flying training,

¹ This article was prepared by the Staff of the Psychological Research Project (Pilot) and edited in the Psychological Section, Medical Research Division, Office of the Air Surgeon, Headquarters, Army Air Forces, Washington, D. C.

one of the pilots assigned to this Project has had approximately 2000 hours flying time instructing students in the army, another has had considerable civilian experience, and a third is a combat returnee. Furthermore, the non-pilot officer and enlisted personnel have received considerable informal instruction in flying various types of army planes. Further insight into the pilot's task has been gained by close collaboration with specialists, such as the members of the AAF Instrument Flying Standardization Board, the Primary Training Advisory Board, and experienced instructors at various schools. Finally, students have been interviewed and studied.

This job analysis has emphasized the importance of the perceptual aspects of flying and the necessity for keeping track of many different things at once. The importance of perception is illustrated by the co-ordinated use of stick and rudder in making turns. Superficially, this might seem to be primarily a matter of motor skill. Actually it hinges on the ability of the pilot to perceive slight shifts in his body when he is thrown off balance because he has not banked the plane enough to compensate for the centrifugal force of the turn. If the pilot has the ability to feel the unbalanced turn, the motor movements for correcting it are relatively simple.² Furthermore, some students are capable of good co-ordination when they are concentrating on it, but make poorly co-ordinated turns when they must pay attention to other things. An example is the turn onto the final approach for a landing where the student, in addition to making a co-ordinated turn, must notice other planes, maintain the proper airspeed, judge his distance to the field, and line up properly with the runway.

The job analysis has also emphasized that the importance of judgment, based on a thorough knowledge of weather, navigation, applied aerodynamics, and aero-equipment, increases in advanced training and tactical operations.

Developing and Testing Objective Measures of Flying Skill

The present system of grading flying performance of students in the AAF is almost entirely subjective. Overall evaluations are made in terms of letter

² Motor Skill is, of course, a factor in other aspects of flying, a good example being the use of the feet in holding the plane straight on the landing roll.

grades: A, B, C, D, E, or F. As is to be expected with such a subjective method, considerable differences exist in the standards of various schools and of the same school on successive classes. Grades in primary school are rather poor predictors of subsequent success in basic; for 2905 students the correlation between flying grades in these two phases was .27.

In an attempt to overcome some of the difficulties inherent in any subjective system of rating flying performance, a large part of the research of the Pilot Project has been devoted to the problem of developing and evaluating objective measures of flying skill, since good measures of proficiency are fundamental to research on both classification and training.

Four Tests of Objectivity. An attempt has been made to develop measures fulfilling four conditions of objectivity:

1. Absolute Agreement Among Observers. Independent observers scoring the same aspect of the same maneuver at the same time should agree. If all students in an experiment are scored by the same two observers, a high correlation will mean only that relative agreement has been established. To prove absolute agreement it is necessary to show also that the means and standard deviations of the scores assigned by the two observers are the same. If scores from a number of randomly matched pairs of observers are combined in the same scatter-diagram, a high correlation will indicate absolute as well as relative agreement.

2. Permanent Independent Standard. The scoring of each measure should be in terms of a permanent standard such as reference points on the plane or instrument readings, and not in terms of subjective standards such as "too high" or "too slow." With subjective standards, it is possible to achieve temporary agreement by special training in which judges compare their results with one another and progressively modify their standards toward agreement. Such subjective standards, however, are not meaningful to individuals without this training, and there is no assurance that the standards of the group will not creep up or down over a period of time.

3. Task Clearly Defined to Subject. The student must be told how the various aspects of a given maneuver will be scored and weighted, because flying is a complex task in which by shifting his attention he

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can improve one aspect of his performance at the expense of another. For example, he must be told the relative penalties for deviating 5 degrees in heading or 50 feet in altitude. If the task is not clearly defined, two students with the same ability may get different scores because of different opinions about what they are expected to do.

4. *Administration Under Standard Conditions.* Unless conditions are standard, test scores will reflect variations in these conditions. The airplane is a complex apparatus. Its performance is influenced by factors such as the maintenance of its engine, the weight of its fuel load, and its rigging. The air is an unstable medium with changes in wind, turbulence, and density. Therefore, standardizing conditions is one of the most difficult problems in measuring flying skill.

Additional Tests of the Measures. It has of course been desirable to develop measures which also have a satisfactory degree of permanence, relevance, and comprehensiveness. Relevance and comprehensiveness have first been determined by discussions with expert instructors and check-pilots. The probable objectivity has been determined by the professional judgment of psychologists. To check on the correctness of these professional judgments, the measures have been subjected to empirical tests of observer reliability, test-retest reliability, ability to discriminate between groups with different amounts of flying training, and ability to predict success in subsequent training. The application of these procedures and the special difficulties encountered will be illustrated by a description of the development of two measures, one of which yielded good results and the other poor results. These measures are, respectively, altitude deviation in steep turns, and place of contact in an accuracy landing.

Example of the Development of a Good Measure: Altitude Deviation in Steep Turns. A job analysis has indicated that altitude control, especially near the ground, is an important part of the pilot's task. Altitude control is more difficult in steep turns than in straight flight because the angle of bank reduces lift and because the plane will lose altitude by slipping if the bank is not properly co-ordinated with the rate of turn. Instructors report that poor students have difficulty in maintaining a constant altitude in steep turns.

1. *Different Forms of the Measure.* Altitude de-

viations have been scored in two ways: the maximum deviation method in which the largest deviation from the starting altitude determines the student's scores; and the range method in which the score is determined by the difference between the highest and lowest altitude during the turn. A comparison between these two ways of scoring suggests that the range method yields slightly higher prediction of subsequent success.

It is also necessary to get some measure of the steepness of the turn in order to be sure that students do not make a shallow turn in which it will be easier to hold altitude. The first scheme of forcing the student to make a steep turn was to measure the time required to turn 360° , giving the students credit for getting around fast as well as for holding altitude. The members of the Primary Training Advisory Board, however, pointed out that students are able to complete the turn more quickly and get a better time score if they force the plane abruptly into a steep bank. This is contrary to their training in the better technique of rolling smoothly and slowly into the desired angle of bank. Therefore, this test would teach bad habits or penalize students who try to perform the maneuver in the way it was taught. This objection was met by requiring a turn and a half (540°), allowing 90° for establishing bank and 90° for rolling out, and measuring time and altitude during the middle 360° of the turn.

This form of the maneuver was tried out with cruising throttle and with full throttle. Since the condition of full throttle yielded slightly higher reliabilities and validities, it was adopted in further work.

Co-ordination was also investigated by installing in the check-pilot's cockpit ball-bank instruments marked off in zones. Since the measure had a fairly low validity on this form of the maneuver and complicated the check-pilot's task, it was dropped.³

Though altitude range on this form of the maneuver yielded satisfactory results, it was noticed that the deviations were greater while the students were rolling into or out of the turn than during the center 360° , the only part which was scored. This is what would be expected because the angle of the wings, and hence the lift, is being changed when the student

³ It is possible that using a more difficult maneuver or a more sensitive means of measurement would make co-ordination a valid measure.

is rolling into or out of his turn. In order to measure altitude deviations during this crucial period without forcing him to perform this part of the maneuver too abruptly, the procedure was radically changed. The student was instructed to perform a 360° turn to the left immediately followed by a 360° turn to the right. Instead of controlling the steepness of the turn by measuring time, the student is told that he will get a zero score unless his bank is steep enough so that the cabane strut on the plane is parallel with the horizon at some time during each turn. This procedure demands a bank of approximately 60° and simplifies the check-pilot's task by allowing him to dispense with the stop watch used in the other method. The student is also scored on whether or not he comes out within 45° of his original heading. The main measure is control of altitude throughout the two steep turns including rolling from a steep left to a steep right bank; two additional measures, reaching proper bank in each turn and coming out within 45° of the original heading, are used to enforce standard conditions of performance.

Two steps were taken to meet a criticism that measuring altitude causes the student to stare at his altimeter throughout the turn instead of flying by the attitude of the plane and looking around to avoid collision. One of these was to have the check pilot mark whether or not the student looked around at least 50% of the time. This measure was abandoned because it had relatively low validity, was difficult to objectify, and complicated the check-pilot's task. The other step was to measure 89 students with instruments visible and also with instruments covered. Since covering the altimeter increased the variation in altitude less than 10%, it was concluded that they must have been flying by the attitude of the plane without relying too heavily on the altimeter. Furthermore, covering the instrument did not seem to increase the ability of the maneuver to discriminate between students with different amounts of flying training.

2. Empirical Tests of the Measure. The ways in which various measures of flying skill have been studied will be illustrated by the tests applied to one form of the measure of altitude deviation in steep turns. The form of the maneuver involved in these tests was the one in which the student performed a 540° steep turn, being allowed 90° in which to establish his bank, and 90° to roll out of it and was

measured on time and altitude range during the middle 360° . This form is selected for discussion because it has been tested somewhat more completely than the others.

a. Observer reliability. Since it is impossible to carry a third person in a primary training plane, no tests could be made of the agreement between two observers independently recording the student's performance.

b. Reliability of test and retest in immediate succession. In certain studies the students were measured on a steep turn to the left and immediately afterwards on a steep turn to the right. The correlations between the scores for left turn and right turn were determined separately on two days for 77 students. These two coefficients were combined by Fisher's z -transformation, yielding a correlation of .45 based on a total of 154 pairs of turns.

c. Reliability of test and retest on different days. In the study on 77 students just described, the left turn on the first day was also correlated with the right turn on the second day and the right turn on the first day was correlated with the left turn on the second day. These two coefficients were combined by the z -transformation, giving a correlation between the altitude range scores on different days of .23.

It will be noticed that the correlation is considerably lower when test and retest are given on different days. The difference is significant at the 2% level and emphasizes the degree to which objective measures are influenced by changes in conditions of testing such as weather, turbulence, and the plane used, as well as by day-to-day variability of the student.

In this study the same observer was used for test and retest on different days. In another study, test and retest on different days were recorded by different observers. In this second study, the difference between the correlations of tests on the same and on different days was about the same, indicating that this measure is sufficiently objective so that changing the observer does not greatly influence its test-retest reliability.

d. Ability to discriminate between students with different amounts of flying training. The assumption underlying the use of this criterion is that flying skill improves with training, and that measures which show this improvement are good measures. In comparing students with different amounts of

flying training, care is taken to see that those with the least amount of training are familiar with the maneuver so that any difference will reflect an improvement in a gradually acquired skill rather than in the student's information concerning what he is expected to do. This criterion, power to discriminate between groups of students with different amounts of training, is an index of the usefulness of this measure in evaluating training experiments.

In a typical study, the altitude range in steep turns was measured for a group of 45 students with 10 hours of flying training and another group of 45 students with 25 hours of flying training. Each student was measured on a left and then a right turn on each of two days. The degree to which the measurement on each turn was able to discriminate between the two groups, expressed as a point-biserial correlation, was .28 and .26 for the left and right turns on the first day and .32 and .27 on the second day. Three of these four correlations are significantly above zero at the 1% level of confidence. This demonstrates that altitude range in the steep turn discriminates between two groups with different amounts of flying training.

e. Ability to predict subsequent success in flying training. The ability of a measure to predict subsequent success may be taken as a criterion of its usefulness in discriminating between students with different amounts of aptitude. It will be noted that this criterion is functionally different from the one just described. Preliminary results suggest that some measures may be good at discriminating different amounts of training but poor at discriminating differences in aptitude, and vice versa. In other words, the errors which characterize the inapt student may be somewhat different from those which characterize the inexperienced one.

In two typical studies, involving a total of 75 cases, steep turns were administered to students between the 10th and 15th hours of training. The altitude scores for left and right turns on the first day, and left and right turns on the second day were summed and correlated with graduation or elimination from primary training. The z -combination of the bi-serial correlations for the two studies was .25. This is significantly above zero at the 7% level and may be taken as a criterion of the usefulness of this measure in discriminating between students with the same amount of training and different degrees of aptitude.

Analysis of the Reliability of a Second Sample Maneuver: An Accuracy Landing. Another sample of the objective measures investigated is the maneuver of making an accuracy landing. Three aspects of this maneuver were measured: the zone of landing, the attitude of the plane (3-point or wheels first) on landing, and whether the student dropped in or bounced more than 3 feet. Furthermore, the student was given a zero score on all three aspects if his landing was so bad that the instructor had to assist him in order to prevent an accident. Experts are of the definite opinion that landing in the proper place in the proper attitude without dropping the plane in or bouncing it involves important aspects of flying skill, namely, the ability to judge space and plan a course through it, to control the attitude and

TABLE 1
Analysis of Landing Measures in Primary Training

	N	ZONE OF LANDING	LANDING ATTITUDE	DROPPED OR BOUNCED
Observer Reliability*.....	304	.83	.79	.88
Test-Retest on the Same Day.....	340	.12	.32	.32
Test Retest on Different Days.....	340	.02	.04	.00

* Since scores from 2 different ground observers and 46 check-pilots were involved in these correlations, they represent absolute as well as relative agreement. Furthermore, there was almost perfect agreement between the means and standard deviations of the scores of the ground and air observers.

airspeed of the plane, and to feel when it is about to stall.

In a study of observer reliability, 152 students during the last week of primary training were given two successive landings, each of which was scored by an observer on the ground as well as by the check-rider in the plane. The correlations between the scores of the ground and aerial observers were determined separately for the first and second landings and combined by the z -transformation, yielding a coefficient based on a total of 304 pairs. The results are presented in Table 1.

In a study of test-retest reliability, 170 students about to graduate from primary were given a pair of successive landings on each of two days. The landings on the second day were with a different check-pilot and in a different plane. The reliability of test and retest in immediate succession was determined by correlating the two landings on the first day with

each other and also correlating the two landings on the second day with each other. These two correlations were then combined by the z -transformation to yield a coefficient based on a total of 340 pairs. Similarly, the test-retest reliability on different days was determined by correlating the first landing on each of the two days and also the second landing on each of the two days. Then these two coefficients were combined by the z -transformation, yielding a correlation based on 340 pairs. The results are given in Table 1.

It will be noted that although these aspects of performance are considered important by expert pilots, the test-retest reliabilities of the measures are extremely low. The fact that the observer reliabilities are relatively high indicates that the low test-retest reliabilities must be produced by erratic changes in performance rather than by errors in measurement. It seems likely that variability in wind, turbulence, and other conditions of testing play an important role in producing these erratic changes in performance and that the maneuver of accuracy landing is especially susceptible to disturbance by such factors.

In both of the sample maneuvers considered, steep turns and accuracy landings, the correlation between two tests given on different days is markedly lower than that between two tests in immediate succession. This fact has two obvious implications:

1. If a reliable measure of the individual student is desired, check-rides must be repeated on a sufficient number of different days in different planes by different check-riders in order to average out the effects of variations in conditions of testing and of possible fluctuations in the individual's ability to perform at different times.

2. In any check-ride used to measure the results of training experiments, it is important to control the effects of conditions of testing by measuring matched pairs of experimental and control subjects as nearly in succession as possible in the same plane and by the same check-rider.

Types of Measures Investigated. Two sample maneuvers and studies designed to test them have been described in some detail. A brief survey will now be presented, giving the number of other measures which have been tried out, the areas covered by these measures and the amount of data collected.

Most of the work of Psychological Research Project (Pilot) has been concentrated on developing

methods for enabling the check-pilot or instructor to secure objective scores with the equipment available on the average army airplane. With this approach it has been possible to secure a broader view of this relatively unexplored area of research than would be possible if work were concentrated on the much slower process of developing recording instruments and analyzing their records. Furthermore, since no new equipment is necessary, it will be much easier to put into immediate practical use any good measures developed. After the area has been thoroughly explored, a better basis will be available for the logical development of recording devices for situations in which more accurate measurement is needed. The general soundness of this approach is indicated by the fact that in many instances it has been possible to make the measures objective enough so that observers agree, only to find that the chief source of difficulty is not in errors of measurement but in erratic day-to-day fluctuations of performance.

A large portion of the work has been concentrated on developing measures relevant to the earliest stages of training in primary flying schools. Since this is the period when the greatest number of eliminations occur, more accurate methods of measurement would have great practical value. Most of the remainder of the work has been concentrated on developing objective measures of instrument flying skill, because of the extreme importance of instrument flying in tactical operations, and because this type of flying seems to lend itself particularly well to objective measurement.

The number of measures on which empirical data have been gathered at each level of training is summarized in Table 2. In making this table minor variations of a measure were not counted. Thus, altitude range in steep turns to the right and in steep turns to the left was considered as one measure. However, altitude range in turns, altitude range in straight and level flight, and altitude range with instruments covered and with instruments visible were considered separate measures. The table also reports the number of correlations which have been calculated for the measures in each category.

Objective Measurement of the Effects of Additional Training on Flying Skill

While the Project was still in the early stages of developing objective measures, it was called upon to

conduct a study which involved securing objective measures of flying skill on more than 8,000 students. The purposes of this study were: (a) to determine the effects of 5 weeks additional training which primary, basic, and advanced students were receiving as a result of a temporary training freeze, (b) to secure normative data on levels of skills of pilots being trained, and (c) to investigate the feasibility of developing and using objective measures of flying skill in large-scale studies.

The scales used were designed to sample differences between groups rather than to measure individuals. Thirteen measures were administered in the primary schools, 17 in basic, 16 in advanced single-engine, and 19 in advanced two-engine schools.

TABLE 2

Number of Measures Experimentally Investigated at Different Levels of Training

	NUMBER OF MEASURES INVESTIGATED	NUMBER OF CORRELATIONS CALCULATED
Primary phase of contact flying.....	131	1,178
Basic phase of instrument flying.....	78	176
Advanced twin-engine (B-25) phase of instrument flying.....	112	181
Miscellaneous, including advanced single and two-engine contact, basic con- tact, etc.....	202	509
Total.....	523	2,044

As a sample of the results secured, the four measures on one maneuver administered to students flying the B-25 plane (Mitchell bomber) in advanced two-engine schools will be described. The maneuver is single-engine procedure. At a time when the student is flying under standard conditions, the instructor cuts one throttle completely, simulating the condition of one engine failing. The student's task is to keep the plane from swerving toward the dead engine, while going through the proper procedure of feathering the dead propeller and increasing power in the good engine with a minimum loss of airspeed and altitude.

Three groups of students with the following types of training were tested: (1) the normal 10 weeks of advanced training on a lower-powered two-engine plane (AT-10 or UC-78), followed by five weeks of training on the B-25 during the freeze; (2) the normal

10 weeks of advanced training on the B-25; (3) the normal 10 weeks of advanced training on the B-25 plus an additional 5 weeks during the freeze, making a total of 15 weeks on this plane. The numbers of students in the three groups were respectively 290, 730, and 275.

Results are presented in Figure 1. It can be seen that the three groups are not different in their ability to hold heading. In the important aspects of holding airspeed and holding altitude, however, there is progressive improvement with additional training on the B-25. It is especially interesting to note that the students with only 10 weeks of advanced training, all on the B-25, are definitely better than those with a total of 15 weeks advanced training, 10 of which were on a lower-powered plane. Apparently the transfer of training is imperfect enough so that the 10 weeks on the lower-powered plane do not help as much as 5 weeks on the higher-powered B-25.

The final measure on the graph, "Following the Procedure Check-list," must be interpreted in light of the fact that proper procedure is stressed during the first few weeks of training on the B-25 and relatively neglected after that. The progressive forgetting shown in the graph clearly indicates the need for more review on this aspect of training.

Research on Fixed Gunnery

The task of the fighter pilot is to plan his approach to intercept the enemy plane and then to fly a smooth pursuit curve which maintains the gun-sight with the proper lead on the target. Since the guns are rigidly fixed to the plane, any slipping or skidding during the pursuit curve will cause the bullets to go wide of the mark.

This Project first investigated the reliability of the scores obtained during fixed gunnery training by correlating the percentage of hits on odd-numbered with that on even-numbered missions and applying the Spearman-Brown formula to estimate the reliability of the sum of both odd and even missions. For 1064 cases the reliability of 1200 rounds of air-to-air fixed gunnery was .63, and on 932 cases the reliability of 400 rounds of air-to-ground gunnery was .59. That these two types of gunnery involve somewhat different skills is indicated by the fact that for 1175 cases the correlation between air-to-air and air-to-ground gunnery was only .22.

The Project has also investigated the learning

curves for gunnery and the effects of other variables such as previous P-40 training, time of day, wind direction and velocity, instructor ratings of turbulence, differences between various schools, and differences between different classes at the same school.

ted in this area. One of the most important of these is to determine the effect of various amounts of fixed gunnery training in lower-powered planes used in the AAF Training Command on subsequent proficiency in the higher-powered planes used in combat.

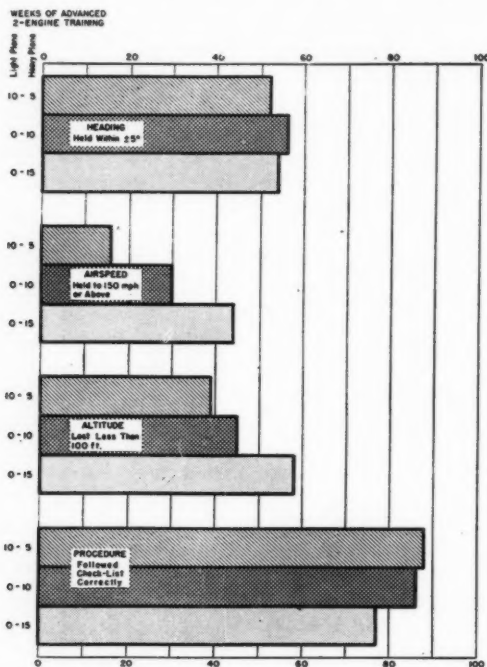


FIG. 1. RESULTS ON ONE OF THE MANEUVERS USED TO MEASURE EFFECTS OF ADDITIONAL TRAINING OBJECTIVELY
Single-Engine Procedure in the B-25

With plane flying on a cardinal heading at an airspeed of 160 mph, wheels down, instructor completely cuts one throttle, simulating engine failure, and measures the student's performance for 2 minutes. 290 students in 10-5 week group, 730 in 0-10 week group, 275 in 0-15 week group.

Probability of Obtaining a Difference as Large as That Observed by Chance Alone

	Heading	Airspeed	Altitude	Procedure
10-5 vs. 0-15.....	0.64	Less than 0.001	Less than 0.001	Less than 0.001
10-5 vs. 0-10.....	0.26	Less than 0.001	Less than 0.08	Less than 0.40
0-10 vs. 0-15.....	0.58	Less than 0.001	Less than 0.001	Less than 0.001

Personnel from the Project have given technical assistance in an experimental evaluation of a training aid, a reflecting sight for the shotgun. Finally, gunnery scores have been collected as criteria to be used in validating pilot selection tests and objective measures of flying skill.

Many important problems remain to be investiga-

Developing Printed Tests to Measure Flying Information

An analysis of the pilot's task has indicated that in tactical operations and combat, judgments based on a thorough knowledge of weather, navigation, applied aerodynamics, and aero-equipment become increasingly important. Printed tests have been

developed to secure reliable measures of the types of knowledge which experts report pilots need in combat.

One of these tests, Pilot Information Test, Form 3, is a 276-item test covering the following areas: Analysis of Maneuvers, Navigation, Aero-Equipment, Instrument Flying, Weather, and Personal Equipment. The sub-sections of the test covering each of these areas are reasonably independent with intercorrelations ranging from .20 to .51. For 371 cases, the odd-even reliability corrected for double length is .85. The scores on this test have been used as one of the bases for selecting the best pilots to be grouped with the best navigators, bombardiers, and flight engineers for training as potential lead crews.

Two 150-item forms of an instrument flying information test have been constructed. The AAF Instrument Flying Board has recommended the use of this test as a part of the procedure for determining who is qualified to receive a rating as an instrument pilot. Finally, a 150-item flying information test has been developed for use at the Redistribution Stations in evaluating combat returnees as potential flying instructors.

Item analyses of tests such as these may give an indication of the areas in which special groups, such as combat returnees, are most in need of refresher training.

Research on Instructor Selection

A job analysis has been made of the qualities most important for the flying instructor. Some of the qualities considered most important by supervisors, instructors, and students are: ability to analyze errors, ability to express himself, patience and self-control, ability to adapt methods to the individual student, interest in teaching flying, and flying ability.

Work has been concentrated on developing a scale to secure reliable ratings of instructors by their students, since the student is ordinarily the only one who has the opportunity to observe the instructor while he is teaching. On the basis of the job analysis, a 34-item scale was constructed for students to use in rating their instructors. After a series of experimental try-outs and revisions this was reduced to an 18-item scale. The reliability of this scale was determined by randomly matching students who had the same instructor and correlating the rating given by one student with that by another. The reli-

bilities of the ratings by students in different levels of training were as follows: from 68 pairs of primary students, .27; from 233 pairs of basic students, .60; from 281 pairs of advanced students, .32; and from 146 pairs of transition students, .57. Scores from an average of four students per instructor have been used in most studies by this Project. From the Spearman-Brown formula the reliability of a combination of four ratings is estimated as: .60 for primary, .86 for basic, .65 for advanced, and .84 for transition.

In a study of the factors related to instructor proficiency, the following three ratings were secured on each of 1286 instructors in Advanced and Transition schools: ratings on the 18-item scale by an average of four students per instructor; supervisors' rating of over-all value as an instructor; and supervisors' rating of flying ability. These different criteria are related to such factors as amount of education, length of experience as an instructor, interest in the job of teaching flying, and marital status. The correlation between students' and supervisors' ratings of instructors is, however, surprisingly low. The intercorrelations based on 1286 cases are as follows: students' vs. supervisors' ratings of teaching = .09; students' ratings on teaching vs. supervisors' ratings on flying = .07; supervisors' ratings on teaching vs. supervisors' ratings on flying = .71.

At present, a study is being made of the relationship between those ratings and a battery of instructor selection tests administered by the psychological units at Redistribution Stations in the AAF Personnel Distribution Command.

CHIEF CONCLUSIONS AND RECOMMENDATIONS

In an annual report summarizing the work for the fiscal year ending 1 July 1945 the Psychological Research Project (Pilot) presented the following main conclusions and recommendations:

1. Important aspects of flying skill can be measured objectively. In spite of difficulties produced by variable conditions of turbulence and wind velocity, it has been possible to construct certain measures with discriminating power. The usefulness of such measures has been demonstrated in a series of studies, one of which involved the testing of more than 8000 students. Further intensive work should be devoted to the development of this field.

2. Scientific techniques of test construction have

been used to develop standardized and reliable printed tests to measure types of information important in combat flying.

3. An analysis of fixed gunnery scores has demonstrated that they are a statistically reliable measure of an important component of fighter pilot skill.

4. A statistically reliable scale has been developed for securing ratings of flying instructors by their students. This scale is being used in further research on instructor selection and should help instructors to discover and correct weaknesses in their teaching techniques.

5. It is believed that more use should be made of training experiments in determining matters of policy. Such experiments can be made more efficient by better design. A scientific experiment involves more than trying something out to see how it works; its great power lies in the fact that conditions are arranged so that the effects of disturbing factors are controlled and the results are decisive and unambiguous. It is also necessary to devise some way of measuring these results so that they can be stated clearly and interpreted in the same way by everyone.

6. It is recommended that one or more experimental schools or squadrons be designated for use in the development and evaluation of new training aids, teaching techniques, and methods of assessing flying proficiency. Experts from each of the relevant specialties should be assigned to such a school. This group should conduct a co-ordinated program of training research and should have its own special staff representation. Ideally, it should be a part of a larger program carried on by a Research Corps throughout the Army Air Forces. As the Training

Command changes over to a peacetime status, one of its important functions should be research to assure this nation leadership in training methods and equipment.

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STATE PSYCHOLOGICAL SOCIETIES¹

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BY WHAT kind of organization may the scientific development and professionalization of psychology be furthered simultaneously, in intimate association, and with mutual advantage?" (1, p. 762). In the past ten years psychologists have given much thought and discussion to this question. Encouraging progress has been made in national organization with the national societies being combined into a single association. But what of the regional and state organizations? Because of the interest in state laws to regulate professional standards, state societies may become increasingly important. What part will these state societies play in the efficient and appropriate organization of psychology as a science and as a profession? How will the state societies be set up? Who will be eligible for membership? What will be the major objectives? How will the state societies be co-ordinated? The present article is a summary of some of the available information on fourteen state societies.² Since other psychologists may wish to organize state groups, the data may serve as a guide to future planning.

PRESENT SOCIETIES

Fourteen state societies are known at least by name.³ Eleven of them were affiliated with the

American Association for Applied Psychology. It is probably significant that ten of the fourteen societies use a limiting adjective—applied, clinical, or consulting—suggesting professional orientation. The number of members in each society varies from ten to over two hundred. Name of society, number of members, and date of AAAP affiliation are given in Table 1.

MEMBERSHIP

Eligibility for membership typically has been a controversial issue. The two outstanding questions seem to be: (1) What academic degree must a person have to be eligible for membership? and (2) How many classes of membership shall there be? Membership requirements for twelve state societies⁴ show that only two of them limit membership to those with the doctoral degree.⁵ On the other hand, three societies provide "student," "affiliate," or similar membership for persons with less than an A.B. degree. Requirements for voting membership are often higher than for non-voting membership with five of the societies restricting voting membership to those with the doctoral degree.

California is reported as having two state societies. Information on other states is not at hand.

⁴ The California and Kentucky societies are not considered in the sections on organization, membership, and purposes, because adequate information was not available. The Massachusetts society is not considered in the sections on organization and purposes, but membership requirements were taken from a report prepared by an AAAP committee in 1942; a copy of the report was made available by Dr. Lloyd N. Yepsen.

⁵ The present discussion of degrees attempts to give a brief and simplified summary of requirements, and therefore ignores distinctions between the Ph.D. and Ed.D., between the M.A., M.S., and equivalent graduate training, and certain other distinctions which are considered in some of the society constitutions. Most of the constitutions include provision for exceptions to stated requirements in unusual cases.

¹ The opinions or assertions contained herein are the private ones of the writers and are not to be construed as official or reflecting the views of the Navy Department or the Naval Service at large.

² Dr. Karl F. Heiser collected most of the data on which this article is based. The authors are also indebted to Dr. Lloyd N. Yepsen, to Dr. Milton A. Saffir, and to Dr. Gilbert J. Rich for information and suggestions. The secretaries of the state societies contributed copies of constitutions and other helpful material. Dr. Donald G. Marquis has contributed to the planning and organization of the article throughout its preparation.

³ A North Carolina group was reported as "apparently still working toward organization" in 1944 and in Iowa there was "apparently no statewide organization" in 1944 (2, p. 17).

TABLE 1
State Psychological Societies

NAME	NUMBER OF MEMBERS*	DATE OF AAAP AFFILIATION
1. California Association of Applied Psychologists.....	?	Not affiliated
2. Connecticut State Psychological Society.....	55	Not affiliated
3. Illinois Association for Applied Psychology.....	67	Not affiliated
4. Indiana Association of Clinical Psychologists, Inc.....	72	1939
5. Kansas State Association of Consulting Psychologists.....	10	1939
6. Kentucky Psychological Association.....	22	1939
7. Massachusetts Society of Clinical Psychologists, Inc.....	35	1939
8. Michigan Psychological Association.....	131	1941
9. Minnesota Society for Applied Psychology.....	86	1941
10. New Jersey Association of Psychologists.....	97	1937
11. New York State Association for Applied Psychology, Inc.....	245	1937
12. Ohio Association for Applied Psychology.....	100	1939
13. Pennsylvania Association of Clinical Psychologists.....	112	1938
14. Wisconsin Association for Applied Psychology.....	18	1939

* The membership figures are not up to date. For nine societies the figures are for Spring 1943 (2, p. 17). For Ohio the figure is for 1944. For Illinois and Connecticut the figure is for 1945. For Minnesota the figure is for 1944 or 1945 and includes 25 inactive members in Military Service.

TABLE 2
Degree Required for Membership

DEGREE	FOR MEMBERSHIP, NUMBER OF SOCIETIES	FOR VOTING MEMBERSHIP, NUMBER OF SOCIETIES
Ph.D.....	2	5
M.A. or equivalent.....	7	6
Less than M.A.....	—	1
Less than A.B.....	3	—

Five of the twelve societies have only one class of membership, five have two classes, one has three classes, and one has four classes. The state societies show considerable variation in the designation used

for different classes of members. For present purposes the classes may be designated as (1) Senior, (2) Junior, (3) Student, (4) Affiliate (from an allied field). In Table 3 the numbers indicate the number of societies which set given academic requirements for the given type of membership. Each society is counted as many times as it has classes of members.

In addition to degrees and formal training some practical experience is usually required for membership, at least for voting membership. Typical requirements for voting membership are a Ph.D. and one or two years of experience or an M.A. and four years of experience. Experience as a substitute for academic training has been a controversial issue, but experience as such has not been. Some societies require only that a member be engaged in work of a psychological or an allied nature. And some societies stipulate the kind of experience: experience under

TABLE 3
Classes of Members and Degree Requirements

DEGREE	SENIOR	JUNIOR	STUDENT	AFFILIATE
Ph.D.....	5			
M.A.....	7	5		
A.B.....		1		
Less than A.B.....			2	2

approved supervision, experience at an independent level, or experience in an applied field.

Other membership requirements often include residence in the state and acceptable professional conduct. At least one society requires courses in clinical psychology. One convenient way of setting up standards was to require that the applicant be a Fellow or Associate in the AAAP or eligible for membership in that organization.

ORGANIZATIONAL FEATURES

The following brief comments summarize the pertinent information on meetings, officers, committees, dues, incorporation, and affiliations.

Meetings. Of eleven societies seven hold at least one meeting a year, three hold at least two meetings, and one society does not set any given number of meetings. Additional meetings may be called by the executive committee, or corresponding authority, or by member petition. Provisions for business and

programs may be stated in the constitution, and quorum requirements set.

Officers and Committees. Officers are typically a president, a vice-president or president-elect, secretary, treasurer, or secretary-treasurer, and an executive committee. The executive committee, also called the executive council, board of directors, or council of directors, is usually composed of several members-at-large plus other officers of the society. One society has only an executive secretary and an executive council. A nominating committee and mail ballots are frequently used for elections. Continuity in the direction of the society's affairs is often considered, especially by provision for staggered terms for the executive committee's members-at-large with only a third or fourth of these members being replaced at any one annual election. The last one or two presidents may attend all executive meetings as consultants, and the president-elect may have a year to become acquainted with his duties. The secretary-treasurer may be elected for three years, and the president and vice-president elected for one year. A program committee, membership committee, and task committees (legislation, ethics, etc.) may be provided for in the constitution.

Dues. Dues are one or two dollars annually for a majority of the societies. Two societies set a maximum of five dollars but actually may collect less. Student and Junior members may pay less than Senior members.

Incorporation. At least four state societies have been incorporated.

Affiliation. AAAP affiliation has been discussed. One society is affiliated with the state conference on social work, and another provides in its constitution for an annual meeting in conjunction with the annual meeting of the state teachers' association. Two societies provide for local psychological groups which may wish to affiliate with the state societies.

PURPOSES OF THE STATE SOCIETIES

All of the state societies are interested in the professional advancement of psychologists working in applied fields. However, some of the societies tend to restrict their program to strictly "professional" activities while others include activities reflecting the interests of academic and research psychologists, psychology students, school teachers and social workers, personnel workers, and others trained in

related fields or with partial or incomplete training. For convenience, the terms "professional" and "general psychological" purposes will be used here in contrasting the two points of view. Some of the most frequently stated or implied purposes of the societies are listed below.

Professional purposes:

1. Standards. Connecticut by-laws: "to establish and maintain high standards of professional competence, service, and conduct."
2. Laws. Ohio constitution: "the promotion of proper and adequate legislation governing psychological services."
3. Training. Wisconsin constitution: "the advocacy and support of adequate training for those working in the field of applied psychology."
4. Professional expansion. Indiana constitution: "to aid in establishing clinical psychological services as widely as possible throughout the state."
5. Employment. Minnesota articles of association: "the improvement of the employment, security, tenure, and status of certified applied psychologists."
6. Promotion. Illinois constitution: "The education of the public in regard to the services rendered by consulting psychologists."

General psychological purposes:

1. Academic psychology. Michigan constitution: "To co-ordinate the activities of academic and applied psychologists."
2. Allied fields. New Jersey 1942 Yearbook: "to foster personal contacts and the exchange of professional experience among those doing psychological or allied work within the state."
3. Scientific papers. New York constitution: "presentation of scientific papers in the field of applied psychology."
4. Co-operative research. Ohio constitution: "the encouragement of co-operative research in the field of applied psychology."
5. Student orientation. Michigan constitution: "Seniors or graduate students . . . may become junior members."

It seems clear that although there is no fundamental conflict between the "professional" and "general psychological" purposes, certain real differences in organization, membership, and major activities do exist among the state societies, and that these differences are related to the two different purposes.

Two contrasting state societies, the Illinois Association for Applied Psychology and the New Jersey Association of Psychologists, will be described here to illustrate the differences. The Illinois society emphasizes "professional" purposes; the New Jersey society gives more attention to "general psychological" interests.

*Illinois Association for Applied Psychology.*⁶ Name, membership, statement of purpose, committees, and activities show the strong emphasis on professional interests of the Illinois society. It was organized to deal with practical problems, e.g. standards, training, legislation, and public relations. A few psychologists met in June, 1935 and arranged a second meeting of prominent state psychologists. A committee then drew up a constitution which was given painstaking consideration, membership requirements and work of the various committees receiving chief attention. The original suggestion for two classes of members was rejected, and membership was limited to those with a Ph.D. and two years of experience. In addition to executive, program, and membership committees, the constitution provides for committees on (1) ethics and training, (2) legislation, (3) public and professional relations.

After the constitution was adopted, one problem discussed was that of "psychological quacks." Means for preventing astrologers, phrenologists, and others from listing themselves as psychologists in the telephone directory were considered. A committee talked with the directory publishers but soon decided that real progress would come only after psychologists obtained legal status. From 1937 to 1939 efforts were centered around preparing legislation. A first attempt was to get an amendment merely defining the term "qualified psychologist" into an existing statute. In 1939 this amendment passed the Senate but did not come to a vote in the House. A second, more ambitious, attempt for certification of consulting psychologists met the same fate. Similar efforts in 1941 were unsuccessful also. Finally, in 1943 a bill for state aid for educable mentally handicapped children was passed which included a definition of "qualified psychological examiner." Other activities related to legislation were: surveys of the legal status and civil service requirements for psychologists throughout the country, study of the

state mental hygiene society's work and of the American Psychological Association's approach to certification, surveys of psychological work being done in various centers in Illinois. Several conclusions were reached: (1) Different fields of psychology require different preparation. (2) The well-trained psychologist recognizes this fact and does not go beyond the area in which he is competent. (3) Certification for each separate field is impractical. (4) Careful studies of training requirements are necessary before existing training programs can be adequately revised.

As another activity the society planned a directory giving the training and experience of all persons in the state calling themselves psychologists. The society kept informed on appointments of psychologists to state public service positions and endeavored to have such positions filled by qualified individuals. Considerable attention was given to reports on the status of clinical, educational, industrial, and consulting psychology, and efforts to improve university and intern training of psychologists in applied fields were begun. A *Yearbook* was published. Meetings on professional or applied topics were held, and a bi-monthly *Newsletter* covering all activities of psychological interest in the state was published. Both the meetings and the *Newsletter* have been made available to all non-member psychologists in the state. Committees in 1940 not provided for in the constitution were: (1) certification, (2) directory, (3) survey, (4) yearbook.

Although development of the Illinois Society has consistently emphasized professional interests, well over half the members in 1940 had formal college and university connections. In that year, of the sixty-one members, fifty-four listed education as one of their major fields of interest, thirty-eight listed clinical psychology, and twenty-two listed business.

*New Jersey Association of Psychologists.*⁷ The New Jersey society's name, membership, programs, and stated purposes indicate a consistent effort to include all psychological and allied fields. The adjective "applied" is not found in the name. Contacts and exchange of experience are the prime objectives. The society, after preliminary meetings in 1925 and 1930, adopted a constitution in 1933. To create a comprehensive group, two classes of

⁶ The historical sketch in the Illinois society's 1940 *Yearbook* is condensed here with a few additions.

⁷ The New Jersey society's *Yearbook* gives most of this information.

members were provided. Active members must have a standing equivalent to APA Associate requirements. Only active members vote and hold office. Associate members (in the New Jersey society) are not necessarily professional psychologists; the essential requirement is participation or employment in an allied field. In 1942 about a fourth of the society were associate members. These included school principals, college teachers, social workers, remedial reading teachers, high school counselors, special class teachers, and psychological workers not eligible for the APA. Specific task committees are not named in the constitution. The society publishes a *Year-book* with a directory of its members.

A major activity of the society has centered around two meetings each year. One meeting is held at a place of psychological activity such as a hospital for psychotics, a junior high school, a school for the deaf, a teachers' college, a university, a school for mental defectives, or an industrial plant. This meeting provides a program closely related to the work of the meeting-place, and also serves as a session for the society's business. The other meeting each year has been held in connection with the New Jersey Education Association and has followed the society's policy of co-ordination with other groups. In 1934 this meeting was held jointly with the state mental hygienists, in 1936 with the state special class teachers, and in 1939 with the co-operating groups of the Education Association. In 1940 the society with eight other groups began a five year arrangement of co-operative meetings. In 1941 nine organizations and the psychological association took part. The meetings have served as first hand surveys of psychological centers in the state, have co-ordinated the development of psychology with work in other fields, and have considered many professional problems. Meetings have been devoted to professional organization, college training of psychologists, plant inspection,

social maturity, reading disabilities, the Rorschach test, high school guidance, birth palsy research, and co-operation of theoretical and applied psychology. Psychology in education has received much attention.

The stated interests of the individual active members are not strikingly different from those of the Illinois group, although industrial psychology seems less well represented. The associate members, from related fields, have no counterpart in the Illinois society. Without the same emphasis on specific group-action objectives, the New Jersey society may be meeting many of the problems singled out for attack by the Illinois group by presenting the psychologist and his work to the public and by raising professional standards. At the same time it has given consideration to the interests of academic and research psychologists, educators, and others interested in psychology and to psychological workers with limited training.

SUMMARY

Some of the available information on fourteen state psychological societies has been summarized to promote interest in such groups and to furnish a possible guide for the organization of similar societies. Constitutions of eleven societies have been considered. Purpose, organization, and activities of two societies with different points of view have been discussed in detail.

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Across the Secretary's Desk

CHRISTMAS MEETING OF THE APA

The officers of the APA, its Board of Directors and Council of Representatives, some of its committees, and the officers of its divisions met in Columbus, Ohio, December 27-29, 1945. The meeting was called to organize the divisions and to allow the Council of Representatives to transact some necessary business.

The entire group met together on Thursday morning for a report of work done at and since the September meeting of the Board of Directors, and to consider plans for the following two days. On Thursday afternoon the Committee on Graduate and Professional Training held an open meeting, while the Policy and Planning Board and the Committee on Publications met in executive session. During the late afternoon and evening, and again on Friday afternoon, divisional caucuses considered the problems of division organization, officers, membership requirements, and by-laws, and in some cases discussed the possibility of amalgamating with other divisions.

Friday morning all division officers met for an informal exchange of ideas and discussion of divisional plans. Edgar A. Doll, reporting for the Committee on Divisional Organization, suggested the possibility of reducing the number of divisions from 18 to 8. The interests most strongly represented in the 1944 poll on divisional preferences, together with the most closely allied secondary interests, were used as a basis for the reduced list of divisions. Reports from the divisional officers present soon made it apparent that they did not wish as great a reduction in the number of divisions as that proposed by Doll.

Both in the formal program and in many informal discussions the chief topic under consideration was that of the divisional structure. Officers supposedly writing up by-laws for their divisions discussed instead the advisability of the division itself. Even when satisfied that their division represented a real

interest group which belonged together, some officers disliked the name used for their division. The feeling gradually grew, however, that the divisions set up by the Committee on the Constitution already had so much history behind them that changes, either in names or groupings, would be a slow process. Even so, proposals for amalgamation will probably be submitted to the members of the following divisions: Division on the Teaching of Psychology to amalgamate with the Division of General Psychology; Division of Abnormal Psychology and Psychotherapy, and possibly also Division of Consulting Psychology to join with the Division of Clinical Psychology; Division of School Psychologists to join either with Division of Clinical Psychology or Division of Educational Psychology; and Division of Psychologists in Public Service to amalgamate with Division of Industrial and Business Psychology.

The by-laws prepared by the several divisions were studied by a committee consisting of Florence Goodenough, Gordon Allport, Robert Brotemarkle, and David Shakow. This committee drew up a model set of by-laws which will be sent to the officers of each division. The purpose is to make the divisional by-laws uniform on matters of terminology, election machinery, and other details that can properly be handled in the same way by all divisions.

Saturday morning the Council of Representatives met to receive committee reports and to act on recommendations prepared by the Board of Directors which had met Thursday night and Friday afternoon and night.

Among the reports of interim actions taken by the Board of Directors was a decision to employ a psychologist in the office of the Executive Secretary to conduct a field study of veterans counseling agencies and to assist them in maintaining an acceptable level of professional service.

A petition to establish a new Division of Psychology of Adulthood and Later Maturity, signed

by 150 members of the APA, was received and approved by the Council.

The Council of Representatives considered a number of amendments to the constitution. All will be submitted to the membership for decision. Some are intended to correct minor points of terminology; another, if passed, will provide for automatic resignation of any member who becomes two years delinquent in the payment of dues; another will prevent any member from being elected to the Council simultaneously in two capacities.

One important amendment provides for the representation of state psychological associations on the Council of Representatives. The plan finally approved by the Interim Committee on State Societies, and the Policy and Planning Board, will give the combined state societies the same representation on the Council that they would have if together they constituted a division of the APA. This amendment also creates a class of State Affiliates who will have the same privileges and pay the same dues as Division Affiliates.

Another important amendment would create an American Board of Examiners in Professional Psychology. This board would be empowered to conduct examinations and to certify highly-qualified specialists in such areas of psychology as the Council of Directors may designate. Pending action on this amendment, the Board of Directors was authorized to appoint an interim committee to make tentative plans for the establishment and procedures of this Board.

The Association accepted the invitation of the University of Pennsylvania to hold its next regular meeting in Philadelphia, on September 4-7, 1946. The occasion will mark the 50th anniversary of the founding of the Psychological Clinic at the University of Pennsylvania and the 60th anniversary of the beginning of psychological work there. If present indications are correct, it will be the largest APA meeting in history.

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Obituaries

CLARENCE STONE YOAKUM

1879-1945

The death of Clarence Stone Yoakum on November twentieth in his sixty-seventh year was instantaneous. He had been working as usual. The day had been occupied with committee meetings and interviews at his office in the Horace H. Rackham School of Graduate Studies, in a sumptuous building the details of which he had helped to plan as a home for graduate student activities. He had, to be sure, for some time been losing weight and associates had noted that he was less vigorous than formerly—ample reason for relinquishing last year the vice-presidency of the University of Michigan to concentrate on his duties as dean of the graduate school. On the evening of this final day he was dining at his Ann Arbor home. Mrs. Yoakum asked a question to which he did not reply. His heart had stopped. This was the exit he would have chosen.

It is too early to appraise Yoakum's place in the history of our fast-expanding profession. But it is fitting to record certain accomplishments, and to point toward circumstances which help to account for his career. First to be mentioned, then, are his student days and his professorship at the University of Texas; then his part in World War I, followed by four years of personnel research at the Carnegie Institute of Technology; and finally, two fruitful decades of educational leadership at Ann Arbor.

C. S. Yoakum—"Stone" to his family, "Clarence" to his pals—was born in Leavenworth County, Kansas, January 11, 1879, to Hedges Conger and Lydia Isabel Stone Yoakum, both of sturdy pioneer stock. At nineteen he began teaching school but did not let these duties entirely interrupt his college studies. At twenty-two he graduated from Campbell College, stayed on for two years as instructor in psychology and education, and then switched to

science and mathematics which he taught at Hiawatha Academy (Kansas), 1903 to 1905.

This was his preparation for graduate work at the University of Chicago—this and an exceptionally shrewd insight into motives, cultivated in part while selling books from house to house to earn some of the money needed for his education.

In the Chicago department of philosophy and psychology the intellectual pot was seething. About John Dewey were gathered such thinkers as George H. Mead, James H. Tufts, Addison W. Moore and Edward S. Ames, constituting the nucleus of what William James had baptized "The Chicago School of Thought" on page one of Vol. I, No. 1 of the *Psychological Bulletin* (1904). Yoakum came directly under Dewey's sway in his mind-stretching lectures on the history of modern philosophy and on logical theory. Advanced comparative psychology was learned from Mead, Dewey's intellectual foil; while Tufts, professor of ethics, gave the courses in social psychology.

Meanwhile Yoakum's mentor was the director of the psychological laboratory, James Rowland Angell, a disciple of Wilhelm Wundt and even more of William James.

The laboratory of those days made available the apparatus described in Titchener's *Manuals*, from the hand-driven color-mixers to the Hipp chronoscope and the Ellis harmonical. The instructor, J. B. Watson, future apostle of behaviorism, teamed up the graduate students and put them meticulously through all the experiments, although he insisted that he himself could not do some of them because his introspections were not consistent from one time to another. Years later Yoakum recalled those difficulties and speculated on the complexity of motives that impel a scientist toward a novel theory of mind.

Watson knew his neural anatomy and handled a scalpel expertly. Yoakum too had the benefit of neurological and physiological training under such

masters as H. H. Donaldson and A. J. Carlson. He learned his abnormal psychology only in part from clinics and textbooks. Of a Sunday evening we would sometimes go to a spiritualist seance in a dingy hall on Fifty-fifth Street, not so much to watch the medium as to get acquainted with followers of the cult.

Angell, superb teacher who directed the laboratory, had himself reacted strongly against the traditional Leipzig custom of dictating to students their problems and methods of research. He scrupulously avoided making specific assignments of doctoral topics; but he passed on to all in his laboratory James's refreshing empiricism and his concern with what mental processes accomplish, biologically. The doctrine of functionalism had been taking form, and Yoakum found it stimulating to ask of each sensory cue, each mental image, each chain of ideas, yes, of each feeling, not only "What is its structure? Into what elementary processes can we divide it?" but even more insistently, "What use is it? What does it do? What is its function within the total activity of biological adjustment?" The laboratory, its cellar redolent of Watson's rats, was humming with novel inquiries in which the uses of mind were deemed to be quite as worthy of attention as its structure.

Yoakum held a fellowship for two years. He chose to come up for his doctorate in 1908 with an experimental thesis on mental fatigue, and immediately thereafter became professor and head of the department of philosophy and psychology in the University of Texas. There he started young men like Walter Hunter on the psychological trail, men who construe psychology as a science and also recognize it as a profession.

Came the first world war. After preparation and preliminary validation of the mental tests known as Army A, precursors of Alpha, the Surgeon General adopted the recommendation of Yerkes' committee and introduced them for use in four cantonments. To organize this service he commissioned Major Yerkes and four first lieutenants, Yoakum, Trabue, Hayes and Foster. Soon Hunter and Berry also received commissions. Yoakum was assigned to duty at Camp Lee where General Cronkhite commanded. Recently an Army officer who had seen Yoakum operating in the field and also in Washington told me: "I learned more about how to deal with

people by watching Lieutenant Yoakum than I ever did from anyone else. He was quiet, friendly, unpretentious; yet he had not been long at Camp Lee before he was getting facilities, space and assistance that more aggressive officers in other cantonments were unable to procure. From rookies to commanding general, men preferred to do what Yoakum proposed. Then, too, he knew just when to ask, and when to wait."

Yoakum's voice was gentle; but you should have heard him bellow when shouting instructions to a hundred recruits!

In due course Yoakum advanced to the grade of Major and functioned as field supervisor of all the mental testing. The results were lucidly described in the familiar little book on *Army Mental Tests* which he wrote jointly with Yerkes for readers who could scarcely be expected to find their way among the details of the National Academy Memoirs, Volume XV.

It was on July 29, 1919, that Dr. Yoakum married Louise Branch Storey of Austin, Texas, and brought her to Pittsburgh where he had been appointed professor of applied psychology and director of the bureau of personnel research in the Carnegie Institute of Technology. Here he at once put Army Alpha to work in industry, not in its original form but in an improved, easily administered spiral omnibus version called "Bureau Test VI" which supplied collaborating business firms with a rough measure of mental alertness. But he was never one of those who imagined that a single test like this would carry an employer very far toward prediction of accomplishment. Instead, he continued to stress—as Scott, Thurstone, Miner, Ruml, Whipple and others of our Carnegie Staff had done before the war—that past accomplishments of an applicant must be accurately ascertained and that facts about his interests, character and temperament were essential.

How could these non-intellectual aspects of personality best be measured? That was the question which Yoakum faced. Encouraged by an appropriation from the National Research Council as well as by support from business firms, he and his assistants digested and systematized whole shelves of published studies about personality. They explored one experimental vein after another. The one which yielded the most gold proved to be the measurement of interests. In the dissertations of Yoakum's

students, B. V. Moore, M. J. Ream, Max Freyd and Grace Manson, was opened the lead which E. K. Strong, at that time working with us on job analyses, has so abundantly developed.

Measurement of individual differences, whether of abilities, alertness, interests or other traits, was not, however, Yoakum's exclusive preoccupation. Analysis of the jobs to be done, the callings for which men may be trained, was not less his concern. Indeed, this aspect of the problem of occupational adjustment has first place in his epoch-marking contribution on "Basic Experiments in Vocational Guidance," published in the *Journal of Personnel Research*, Vol. I, No. 1, 1922, and is illustrated again in the volume on *Selection and Training of Salesmen* which he later published with Kenagy.

It was in 1924 that Yoakum went to the University of Michigan as professor of personnel management. At that institution he remained except for one academic year, 1929-30, when he served as dean of the college of liberal arts at Northwestern University. His influence has been widespread both on and off the Michigan campus. In 1927 he was made director of the bureau of university research and in 1930, vice-president of the university. In 1935 he shouldered also the deanship of the graduate school. To each of these assignments he brought his scientific method, his quest for authentic measured data and ascertained relationships; and he continued to practice psychology.

As a counselor he employed with sure artistry the non-directive interview years before it became the fashion. To be sure, when definite direction was clearly indicated he did not hesitate to give it.

He would adroitly avoid supplying factual information which a student might dig out for himself and in the process begin to navigate unaided.

He read, or skimmed, voluminously. He would take a proffered dissertation or report and thumb it through, one glance to the page, raising questions and dropping shrewd comments.

Knowing at first hand what it means to struggle for an education, Yoakum held tenaciously to the conviction that it is a responsibility of the state to seek out gifted young people and open to them a highway of opportunity. For ten years he acted as

director of alumni undergraduate scholarships and was instrumental in securing the Regents' scholarships which annually provide grants to more than 700 promising students.

Recently, as in all his professional career, he had been taking the initiative in organizations for personal assistance to able young people. For instance, as chairman of the coordinating committee for veterans' service, he was a prime mover in establishing the veterans' service bureau at the University. Earlier he had planned and shaped the Institute of Human Adjustment which provides psychological diagnosis, speech correction and vocational counseling on the campus.

To the University of Michigan where Angell had studied and Dewey had written his *Psychology*, their pupil brought a plentiful harvest.—WALTER V. BINGHAM.

FRANCIS N. MAXFIELD

1877-1945

Francis N. Maxfield, professor of psychology at Ohio State University, died suddenly November 10th. He had been a member of the faculty since 1925. Born sixty-eight years ago in Sandwich, Massachusetts, he received his A.B. from Haverford in 1897 and his Ph.D. from Pennsylvania in 1912. Before coming to Ohio State University he served for six years on the faculty of the University of Pennsylvania, two years as psychologist in the Newark, New Jersey Public Schools, and five years as director of special education for the state of Pennsylvania. At Ohio State his principal activities involved teaching courses dealing with deviates and with psychometrics, carrying a portion of the service load in the psychological clinic and providing liaison with outside agencies needing psychological help such as the Children's Hospital and local courts. His research interests dealt particularly with feral children and with children reared in isolation. His avocational interests centered around the bridge table and the flower garden. His influence will still be felt through the students who majored under his direction and in the numerous clients whose life adjustments benefited from his counsel.—HAROLD E. BURTT.

Psychological Notes and News

CHARLES A. FORD, JOHN G. JENKINS, and C. M. LOUITT have been promoted to the rank of Captain in the United States Naval Reserve.

W. D. NEFF has been appointed assistant professor of psychology at the University of Chicago. Dr. Neff has been employed by the Division of War Research of Columbia University since 1942.

MILDRED ATWOOD, formerly secretary of the Division of Anthropology and Psychology of the National Research Council, has been appointed assistant editor of *Science*.

SAMUEL GOLDBERG, Major, AGD, Chief of the Special Training Section, Office of the Director of Military Training, Army Service Forces Headquarters, has been awarded the Legion of Merit for his work in the training of illiterates and men in correctional organizations.

KARL U. SMITH has been appointed director of the Bureau of Industrial Psychology at the University of Wisconsin. During the war he was engaged in research for the Applied Psychology Panel of the National Defense Research Committee.

Shortly after V-E day Dr. Arnold Gesell of Yale University received the following cablegram of interest to all psychologists: "Accept my cordial congratulations glorious victory our countries. Tell our congratulations American psychologists. ALEX LURIA."

STUART H. BRITT has been appointed associate director of research with the advertising firm of McCann-Erickson, 50 Rockefeller Plaza, New York City. During the war years he served as the first director of the Office of Psychological Personnel and later as Lieutenant Commander, USNR, in the office of the Commander-in-Chief, U. S. Navy.

RAYMOND CORSINI has been transferred to the Reception and Classification Center of the New York State Department of Correction at Elmira, New York, as senior psychologist from his former position as psychologist at Auburn Prison.

Returning to the department of psychology at the University of Washington are WILLIAM R. WILSON, formerly in the Adjutant General's Office; GEORGE P. HORTON, who has been serving with the Training Research Group, Assistant Chief of Air Staff-3; and THOMAS G. HERMANS, who has been doing research under the National Defense Research Committee at the Navy Yard, Washington, D. C.

PROFESSOR W. WIRTH, formerly of the University of Leipzig, survived the war and is now living in Bavaria on a pension. The psychological laboratory and Dr. Wirth's home were destroyed during an air-raid on December 4, 1943. The *Archiv für die gesamte Psychologie* which Dr. Wirth edited was suspended by the Nazi government at the close of Volume 112 "since it could no longer be concealed that the printer's grandmother was Jewish."

C. M. LOUITT has been appointed professor of psychology at Ohio State University and is assuming direction of work in clinical psychology. Captain Louttit has been released to inactive duty from his post as commanding officer of the Service School Command, Naval Training Center, Bainbridge, Maryland.

ARTHUR WEIDER has been appointed personnel consultant in the Medical Division of the Caterpillar Tractor Co., Peoria, Illinois. Dr. Weider was formerly at the New York Hospital on war projects for the Committee on Medical Research of the Office of Scientific Research and Development.

EUGENE SHEN has written to Florence Goodenough of the University of Minnesota that he has

been completely cut off from all professional associations for more than four years and therefore would greatly appreciate receiving any reprints or other psychological literature. Material should be sent directly to Dr. Shen at 730/6 Connaught Road, Shanghai, China.

DONCASTER G. HUMM has resigned from the American Psychological Association and announces his new offices at 1219 West 12th Street, Los Angeles 15, California.

JOHN G. JENKINS is returning to the University of Maryland as professor and chairman of the department of psychology after serving as Captain, USNR, where he directed the Aviation Psychology Section of the Bureau of Medicine and Surgery. GEORGE A. KELLY, Lt., Comdr., USNR, has been appointed associate professor of psychology, and DENZEL D. SMITH, Lt., USNR, and FILLMORE H. SANFORD, Lt., USNR, have received appointments as assistant professors of psychology at the University of Maryland.

WILLIAM E. KAPPAUF, JR. has been appointed associate professor of psychology at Princeton University. Among his duties will be the teaching of psychology to engineering students. During the war he was engaged in research for the Applied Psychology Panel, National Defense Research Committee.

JEAN PIAGET has been appointed to the professorship at the University of Geneva left vacant by the death of Professor Claparède and also has been made editor of *Archives de Psychologie*.

The Chicago office of Stevenson, Jordan, & Harrison, Inc., management engineers, has recently added ELEROY L. STROMBERG and RENÉ L. GAIENNIE to its psychological staff. Both Dr. Stromberg and Dr. Gaiennie have been serving in the Aviation Psychology Section of the Bureau of Medicine and Surgery of the U. S. Navy.

JOHN E. KARLIN, formerly at the Psycho-Acoustic Laboratory of the National Defense Research Committee at Harvard University, has joined the research staff of the Bell Telephone Laboratories.

WAYNE DENNIS, Lt., USNR, Special Devices Division of the Office of Research and Invention, has been appointed professor and chairman of the department of psychology at the University of Pittsburgh.

New appointments in the department of psychology at Northwestern University in addition to WILLIAM A. HUNT and GORDON V. ANDERSON, previously announced, include: ROBERT W. KLEEMEIER, Lt. (jg), U. S. Maritime Service Training Division; A. C. VAN DUSEN, Lt. (jg), USNR; and HERBERT F. WRIGHT, Lt. H(S), USNR. DONALD B. LINDSLEY, formerly of Brown University and director of the psychological laboratory at the Emma Pendleton Bradley Home and during the war with the National Defense Research Committee, has been appointed professor of psychology and will take up his duties at Northwestern University next fall.

NORMAN L. MUNN has resigned from the department of psychology at Vanderbilt University to take up the professorship of psychology at Bowdoin College where he will assume his duties next October.

Cornell University has announced the retirement of R. M. OGDEN, dean of the College of Arts and Sciences and HARRY F. WELD, professor of psychology.

WILLIAM C. BIEL has been appointed associate professor of psychology at Denison University. During the war he was engaged in research for the Applied Psychology Panel of the National Defense Research Committee.

Social Science Research Council Awards. JOHN C. EBERHART, Lt., USNR, has received a Demobilization Award for the study of the functions and procedures of the House of Representatives. HARVEY C. LEHMAN, professor of psychology, Ohio University, has received a grant-in-aid for research leading to the completion of a study of the chronological age levels at which men do their best work in various lines of endeavor.

KENNETH K. LOEMKER, former associate professor of psychology and dean of men, Marshall College, who has been in service with the Army

since 1942, has returned to the college as professor and head of the department of psychology.

FORREST H. KIRKPATRICK has returned to the faculty of Bethany College as dean of students after having been on leave of absence during the war when he served as personnel manager of the Indianapolis plant of Radio Corporation of America.

The University of Oklahoma announces the following appointments: JOHN H. ROHRER, associate professor of psychology, to teach courses and direct research in industrial psychology; W. B. LEMMON, director of the testing and guidance service and assistant professor of psychology; M. R. DENNY, instructor in psychology, to teach courses in psychology and serve as part-time instructor in the Veterans Advisement Center.

Under the "Surplus Property Act of 1944" there is provision for disposal of property to non-profit institutions. It is probable that materials of value to psychological research and instruction will be made available at nominal costs. Since the sales will be handled by several different agencies, psychologists who are interested in acquiring material should make inquiries to their purchasing agent or to the nearest War or Navy Department salvage officer. The Division of Surplus Property Utilization, U. S. Office of Education, is serving as liaison office between disposal agencies and non-profit institutions.

The National Roster of Scientific and Specialized Personnel offers its help and extensive resources to returning veterans and displaced war workers who are scientifically and professionally qualified and who are seeking employment in industry, non-profit research institutions, colleges, and universities. The address is: National Roster of Scientific and Specialized Personnel, 1006 U Street, N. W., Washington 25, D. C.

Vocational counselors and clinical psychologists still are needed in Veterans Administration Hospitals and Out-Patient Clinics and in the United States Public Health Service Clinics. Annual salaries range from \$2,980 to \$5,180. Application forms may be obtained from post-offices or the United

States Civil Service Commission, Washington 25, D. C.

The Psycho-Acoustic Laboratory, established at Harvard in 1940 as a war research unit under the National Defense Research Committee, will continue its activities directly under the Faculty of Arts and Sciences. Funds available under a contract with the U. S. Navy, Office of Research and Invention, will provide for basic research in experimental psychology, with special emphasis on problems of communication (speech, hearing, and electronics). There will be a research and teaching staff of about twelve members, including S. S. STEVENS, director, and E. B. NEWMAN, associate director.

The Johns Hopkins University has accepted a contract with the Office of Research and Invention, Navy Department, for basic and applied research in various problems of perception and psychomotor function. The contract is, in part, a continuation of wartime research carried out by Harvard University under the National Defense Research Committee, but it also encompasses other more basic and long-range studies which were indicated by wartime research experiences. The objectives of the research are: (1) to provide data which may be useful in improving the design of various informational devices, such as radar indicators, dials, radio and communications devices, and other instruments used aboard naval vessels, and (2) to increase the effectiveness of information centers and systems by improving the methods of operation of equipment and by assigning more scientifically the tasks to be performed by each instrument and person in the system. The director of research is C. T. MORGAN and the associate director is FERDINAND HAMBURGER, JR.

The Permanent Science Fund of the American Academy of Arts and Sciences offers grants-in-aid to support research in psychology and other sciences. Applications are considered on March 1 and October 1. Address communications to: John W. M. Bunker, Permanent Science Fund Committee, Massachusetts Institute of Technology, Cambridge, Massachusetts.

Convention Calendar

American Psychological Association, Inc.

Date: September 4-7, 1946

Place: University of Pennsylvania
Philadelphia, Pennsylvania

For information write to:

Dr. Dael Wolfe
Executive Secretary
American Psychological Association
2101 Constitution Avenue
Washington 25, D. C.

American Association for the Advancement of Science

Date: March 27-30, 1946

Place: St. Louis, Missouri

For information write to:

Dr. H. A. Meyerhoff, Executive Secretary
American Association for the Advancement of Science
Smithsonian Institution Building
Washington 25, D. C.

American Orthopsychiatric Association, Inc.

Date: February 14-16, 1946

Place: Hotel New Yorker
New York City

For information write to:

Dr. Nina Ridenour
Secretary, American Orthopsychiatric Association
Room 916
1790 Broadway
New York 19, N. Y.

Eastern Psychological Association

Date: April 26 and 27, 1946

Place: Fordham University
Fordham Road and Third Avenue
Bronx, New York

For information write to:

Dr. Theodora Abel
Letchworth Village
Thiells, New York

Midwestern Psychological Association

The 1946 meeting of the Midwestern Psychological Association will be held in conjunction with the meetings of Section I (Psychology) of the American Association for the Advancement of Science.

Date: March 28-30, 1946

Place: St. Louis, Missouri

For information write to:

Prof. Harold E. Burt
Department of Psychology
Ohio State University
Columbus, Ohio

Southern Society for Philosophy and Psychology

Date: April 18-20, 1946

Place: Charlottesville, Virginia

For information write to:

Dr. Elizabeth Duffy
Secretary-Treasurer
Southern Society for Philosophy and Psychology
The Woman's College of the University of North Carolina
Greensboro, North Carolina

Rocky Mountain Branch of the American Psychological Association

Date and place: To be announced

For information write to:

Dr. Lillian G. Portenier
Department of Psychology and Philosophy
University of Wyoming
Laramie, Wyoming

Western Psychological Association

Date and place: To be announced

For information write to:

Dr. Ralph H. Gundlach
Department of Psychology
University of Washington
Seattle 5, Washington

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